

AMENDED CLAIMS

Claims 1-20 have been cancelled.

I 21. (New) Apparatus for carrying out liquid-liquid micro extraction or liquid-liquid-liquid micro extraction, said apparatus comprising:

a first container for receiving a sample solution, the solution comprising a dissolved analyte;

112, 2 a second hollow container disposed within said first container and having a membrane wall with fibre pores permeable by the analyte;

a acceptor solution disposed within the second container; and

means for enhancing transport of the analyte from the sample solution, through the membrane wall and into said acceptor solution.

22. (New) The apparatus according to claim 21 further comprising a liquid membrane disposed in said fibre pores.

7 23. (New) The apparatus according to claim 22 wherein said liquid membrane comprises 1-octanol. p. 56 ras. ref

b2 24. (New) The apparatus according to claim 21 wherein the second container is a tubular microporous fibre.

25. (New) The apparatus according to claim 24 wherein the tubular fibre has a closed end and a open end for receiving and removal of said acceptor solution.

26. (New) The apparatus according to claim 24 wherein the tubular fibre has two open ends for receiving and removal of said acceptor solution.

27. (New) The apparatus according to claim 26 wherein the tubular fibre comprises a polymer.

28. (New) The apparatus according to claim 21 wherein said first container has a volume of V_s , said second container has a volume of V_a and a ratio of V_s to V_a is ≥ 50 .

29. (New) The apparatus according to claim 28 wherein V_a is between about 1 μ l and about 50 μ l.

30. (New) The apparatus according to claim 21 wherein said acceptor solution has a pH for ionizing the analyte to prevent ionized analyte from passing from said acceptor solution through the membrane wall and into the sample solution.

II
31. (New) Apparatus for carrying out liquid-liquid micro extraction or liquid-liquid-liquid micro extraction, said apparatus comprising:

a first container;

a sample solution disposed in said first container, said sample solution comprising a dissolved analyte;

b2 *1, 12, 2* *→ 15 is hollow?*
a second hollow container disposed within said sample solution and having a membrane wall with fibre pores permeable by the analyte;

an acceptor solution disposed within the second container, said membrane wall enabling analyte equilibrium to be established between said sample solution and said acceptor solution.

32. (New) The apparatus according to claim 31 further comprises a liquid membrane disposed in said fibre pores.

33. (New) The apparatus according to claim 32 wherein said liquid membrane comprises 1-octanol.

34. (New) The apparatus according to claim 31 further comprising means for accelerating analyte equilibrium between said sample solution and said acceptor solution.

35. (New) The apparatus according to claim 31 wherein the second container is a tubular microporous fibre.

36. (New) The apparatus according to claim 35 wherein the tubular fibre has a closed end and an open end for receiving and removal of said acceptor

37. (New) The apparatus according to claim 35 wherein the tubular fibre has two open ends for receiving and removal of said acceptor solution.

38. (New) The apparatus according to claim 37 wherein the tubular fibre comprises a polymer.

39. (New) The apparatus according to claim 31 wherein said first container has a volume of V_s , said second container has a volume of V_a and a ratio of V_s to V_a is ≥ 50 .

40. (New) The apparatus according to claim 39 wherein V_a is between about 1 μ l and about 50 μ l.

41. The apparatus according to claim 31 wherein said acceptor solution has a pH for ionizing the analyte to prevent ionized analyte from passing from said acceptor solution through the membrane wall and into the sample solution.

II

42. (New) A method of liquid-liquid micro extraction, or liquid-liquid-liquid micro extraction, said method comprising the steps of:

disposing a sample solution comprising a dissolved analyte into a first container;

1, 2, 2 disposing a second hollow container into said sample solution, providing the second container with a membrane wall having fibre pores permeable by the analyte; *doesn't require to go through*

disposing an acceptor solution into the second container;

allowing analyte equilibrium to be established between said sample solution and said acceptor solution through said membrane wall; and

removing analyte enriched acceptor solution from said second container.

b2 43. (New) The method according to claim 42 further comprising the step of disposing a liquid membrane in said fibre pores before disposing said second hollow container into said sample solution.

44. (New) The method according to claim 42 wherein the step of disposing a second hollow container into said sample solution comprises disposing a tubular microporous fibre into said sample solution.

45. (New) The method according to claim 44 wherein the step of disposing a tubular fibre comprises disposing a closed end fibre into said sample solution.

46. (New) The method according to claim 44 wherein the step of disposing a tubular fibre comprises disposing a center portion of a tubular fibre having two open ends into said sample solution.

47. (New) The method according to claim 44 wherein the step of disposing an acceptor solution into the second container comprising the step of disposing an acceptor solution having a pH for ionizing the analyte to prevent ionized analyte from passing from said acceptor solution through the membrane wall and into the sample solution.

48. (New) A method of liquid-liquid micro extraction, or liquid-liquid-liquid micro extraction, said method comprising the steps of:

disposing a sample solution comprising a dissolved analyte into a first container;

b2 1132 disposing a second hollow container into said sample solution and providing the second container with a membrane wall permeable by the analyte;

disposing an acceptor solution into the second container;

enriching analyte in said acceptor solution by allowing analyte equilibrium between said sample solution and said acceptor solution through said membrane wall; and removing analyte enriched acceptor solution from said second container.

49. (New) The method according to claim 48 further comprising the step of disposing a liquid membrane in said fibre pores before disposing said second hollow container into said sample solution.

50. (New) The method according to claim 48 wherein the step of disposing a second hollow container into said sample solution comprises disposing a tubular microporous fibre into said sample solution.

51. (New) The method according to claim 50 wherein the step of disposing a tubular fibre comprises disposing a closed end fibre into said sample solution.

52. (New) The method according to claim 50 wherein the step of disposing a tubular fibre comprises disposing a center portion of a tubular fibre having two open ends into said sample solution.

53. (New) The method according to claim 48 wherein the step of disposing an acceptor solution into the second container comprising the step of disposing an acceptor solution having a pH for ionizing the analyte to prevent ionized analyte from passing from said acceptor solution through the membrane wall and into the sample solution.

54. (New) A method of liquid-liquid micro extraction, or liquid-liquid-liquid micro extraction, said method comprises the steps of:

disposing a sample solution comprises a dissolved analyte into a first container;

112,2 disposing a second hollow container into said sample solution and providing the second container with a membrane wall permeable by the analyte;

disposing an acceptor solution into the second container and providing the acceptor solution with a pH for ionizing the analyte in order to prevent ionized analyte from passing from said acceptor solution through the membrane wall and into the sample solution;

enriching analyte in said acceptor solution by allowing analyte equilibrium between said sample solution and said acceptor solution through said membrane wall; and

removing analyte enriched acceptor solution from said second container.

55. (New) The method according to claim 54 further comprising the step of disposing a liquid membrane in said fibre pores before disposing said second hollow container into said sample solution.

56. (New) The method according to claim 54 wherein the step of disposing a second hollow container into said sample solution comprises disposing a tubular microporous fibre into said sample solution.

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57. (New) The method according to claim 56 wherein the step of disposing a tubular fibre comprises disposing a closed end fibre into said sample solution.

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58. (New) The method according to claim 56 wherein the step of disposing a tubular fibre comprises disposing a center portion of a tubular fibre having two open ends into said sample solution.
